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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,046	04/26/2001	Toshitaka Shibata	14998.270	8913

7590

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EXAMINER

BELLAMY, TAMIKO D

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 08/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/843,046

Applicant(s)

SHIBATA ET AL. *He*

Examiner

Tamiko D. Bellamy

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8/1, and 9 are rejected under 35 U.S.C. 103(a) as being obvious over Nomura et al. (5,948,991) in the view of Lam et al. (4,942, 383).

With respect to claims 1 and 2, Nomura et al. discloses in Figs. 3, 8 5, and 15 a base (e.g., block 122), a pressure injection section (e.g., pressure introduction hole 30a), and a lead (16) connected to a pressure-sensitive section (e.g., sensor chip 11). The device of Nomura et al. discloses the pressure sensitive element (e.g., sensor chip 11) is fixedly adhered onto a base (e.g., resin block 3) by a resin adhesive agent (14) (col. 4, lines 21-24). With respect to the further limitations of claim 2, as depicted in fig. 8, Nomura et al. discloses a pressure-sensitive section (130) enclosed by a sensor package (133, 137). Nomura et al. lacks the detail of the affixing by the use of a fluoroc elastomer. Lam et al discloses elastomeric mounting whereby the fluoroc elastomer (e.g., elastomeric adhesive 46) extends about the lower edge of the pressure-sensitive section (e.g., pressure sensitive die 34) (col. 3, lines 8-12). Furthermore, the device of Lam et al. discloses the elastomeric adhesive comprises Fluorosilicone rubber that is equivalent to a fluoroc elastomer (col. 5, lines 8-10). Therefore, to modify Nomura et al. by employing a fluoroc elastomer would have been obvious to one of ordinary skill in the art at the time of the invention since Lam et al. teaches a pressure sensor having theses design characteristics.

The skilled artisan would be motivated to combine the teachings of Nomura et al. and Lam et al. since Nomura et al. states that his invention is applicable to pressure sensor for detecting pressure intake in an engine and Lam et al. is directed to pressure sensor use in various automotive applications.

With respect to claim 3, Nomura et al. discloses in Fig. 8 a resin block (132) that covers the pressure-sensitive section (e.g., pressure sensor chip 130) (col. 7, lines 24-28, col. 9, lines 38-46), a lead (131) connected to the terminal of the pressure-sensitive section (130)(col. 10, lines 1-8). As depicted in fig. 1, the lead (131) is connected to the base, and the resin block (132) covers a portion of lead (132) and covers all of the pressure-sensitive section (e.g., pressure sensor chip 130).

With respect to claim 4, Nomura et al. discloses in figs. 3 and 6 a gel-like protective member (15) on the pressure-sensitive section (e.g., sensor chip 11). The gel-like is from the silicone resin group (col. 7, lines 26-28). The gel-like protective member (15/132) is equivalent to a fluoric gel. As one with ordinary skill in the art, knows that a fluoric elastomer is a material that has a rubbery-like elasticity. The gel-like protective member 132 is therefore inherently a fluoric gel.

With respect to claims 5-7, the combination of Nomura et al. and Lam et al. discloses a fluoric gel and a fluoric elastomer. As well known in the art, if type of material is known such factors such as the hardness of a material is also known. Therefore the fluoric elastomer is inherently harder than the fluoric gel as claimed.

With respect to claims 8\3 and 9, Nomura et al. discloses a pressure sensor (121) used for detecting an air intake of an engine (col. 6, lines 9-19).

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*Response to Remarks*

3. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection. It is the examiners position that claims 1-9 are not patentable over the newly applied art of Nomura et al. in view of Lam et al.

*Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

The following patents are cited to further show the state of art with respect to pressure sensor affixed to a base by a elastomer:

U.S. Pat. No. (5,090,247) as to Liebgen.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (703) 305-4971. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

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Tamiko Bellamy

T.B.

July 31, 2003

A handwritten signature in black ink, appearing to read "Hezron Williams", followed by a long horizontal line extending to the right.

HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800